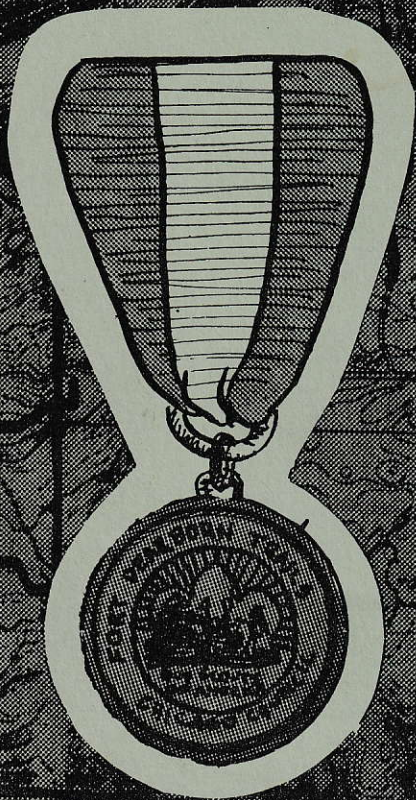


FORT DEARBORN

TRAILS



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FORT DEARBORN HIKING TRAILS

The Fort Dearborn Hiking Trails are five backwoods nature trails about 77 miles long altogether. Boy scouts, explorers, and adults who pass the trail requirements are eligible for the Fort Dearborn Trails Medal.

The trails are not blazed. To hike each trail you must follow the route indicated on the trail map and see each point of interest. At the point you must read the explanation in the trail booklet. Credit cannot be given for trails incorrectly hiked.

The trail maps can be read the same way any adult reads a road map. There is seldom any need to find compass azimuths or count paces.

Steps in reading a map:

1. Determine where you are on the map.
2. Determine where you want to go on the map.
3. Determine how to get there--by following a trail, creek, edge of pond, a road, compass azimuth, etc.

The trails are a challenge to scouts to put to use the skills they have learned. The scout should respond to this challenge by finding his own way over the trails and by doing his own thinking and planning. Scoutleaders should not take it upon themselves to blaze these trails or lead their scouts over them.

There is an opportunity for scouts to acquire some of the knowledge necessary to earn these merit badges: botany, geology, nature, forestry, wildlife management, and Indian lore.

To earn the Fort Dearborn Trails Medal a scout must:

1. Advance to first-class rank.
2. Read the chapter on wildlife and woodlore (Chapter 12) in the Handbook for Boys. It is about 80 pages long. Be ready to answer questions about it.
3. After you have done the above, hike the 5 trails.
Upward Trail (14.6 miles) and Trail A winding (16.5 miles), each of which start and end at Camp Kiwanis and may be hiked the same weekend, one on Saturday the other on Sunday, camping overnight.
Indian Reserve Trail (15.2 miles) starts at Trailside Museum, ends at Des Plaines, passes through Camp Dearborn.
Border Trail (17.4 miles) starts and ends at Des Plaines and may be hiked the same weekend as the I.R. Trail, camping at Dearborn. Or both trails can be hiked using railroads for transportation.
Duneland Trail (13.3 miles) at Indiana Dunes State Park.
 - a. Each hiker must carry with him this trail booklet and Handbook for Boys on each trail. Recommended: Forest Trees of Illinois, available at Dept. of Conservation, State of Illinois Bldg., Randolph and LaSalle Sts. At the certification point for each trail show the ranger this equipment.
 - b. All trails must be started in the morning. Usual hiking speed--2 miles per hour. DON'T WASTE TIME. Carry sandwiches, you won't have time to cook.
 - c. The scoutmaster must make sure that the scout has enough common sense to hike the trail properly. Mere knowledge of scout skills is not enough.
 - d. Scale of maps is 2000 feet per inch unless otherwise specified. Contour interval is 5 feet.
 - e. Respect the laws in force in the hiking areas. PROHIBITED: hunting & trapping, picking wild flowers, carrying firearms, slingshots, sheath knives, machetes, axes, hatchets, cap guns, fireworks, and BB guns, camping outside of scout camps, etc. Fines from \$5.00 to \$200.00.

- f. You are on your honor to hike the required trails and follow instructions exactly. Your character is judged by what you do when no one else would ever know the difference.
4. After you have done the above take the conservation pledge.
5. After you have done the above visit:
The Chicago Academy of Science Museum in Lincoln Park and spend at least an hour there.
The site of Fort Dearborn at Michigan Ave. and Wacker Dr.

* * *

From the time Scouting first started in the Midwest, leaders envisioned a hiking trail for scouts in the Chicago Area. Over the years many attempts were made to set up such a trail but nothing came of them.

Bill King of the Austin District Scout Adventurers kept this idea alive. He chose the name, Fort Dearborn Trails, designed the trail medal, and developed the conservation pledge. In November of 1953 he met Jim Marshall who while a senior scout had systematically explored and mapped the Forest Preserves as a hobby. From his maps, knowledge of the area, and research Jim created this trail booklet. He developed the information on geology and ecology to unify the trail system and give a purpose to hiking. He is a civil engineer and graduate of Illinois Institute of Technology.

Bill King and Jim Marshall opened the trails for hiking in September, 1954. This is the third edition of the trail booklet, published October 5, 1958.

All of the work on this trail program has been donated. Thanks is also due those who donated their time in getting this booklet printed.

SUGGESTIONS

Books on nature are available at the Field Museum in Grant Park. For Indian Lore merit badge see halls 4,5,6, and 7; Forestry--hall 26; Geology--halls 34,35,38,36, 37,31; Astronomy--hall 35 & Planetarium; Insect Life--hall 18; Reptile Study--hall 18.

Trail maps available from Forest Preserve Dist., 536 N. Harlem, River Forest, Ill.

Tribune Chicagoland Map, available at Tribune Office, Dearborn & Monroe, is recommended.

Topographic maps, made by the Geological Survey, are available at Rand McNally's, 124 W. Monroe and at Horders, Washington and Clark.

"Be Expert at Map & Compass," available at trading post.

Visit Johnsons Mound, a kame, 2 miles southwest of LaFox, rich in Indian Lore.

Visit Rocky Glen Forest Preserve, area of interesting botany and geology, also the beach at Glencoe.

Visit strip mine area near Coal City for fossils.

Visit Morton Arboretum and hike the nature trails there.

UPWARD TRAIL

The trail starts and ends at Camp Kiwanis, the location of which is indicated on the trail map of the Palos Hills Area southwest of Chicago.

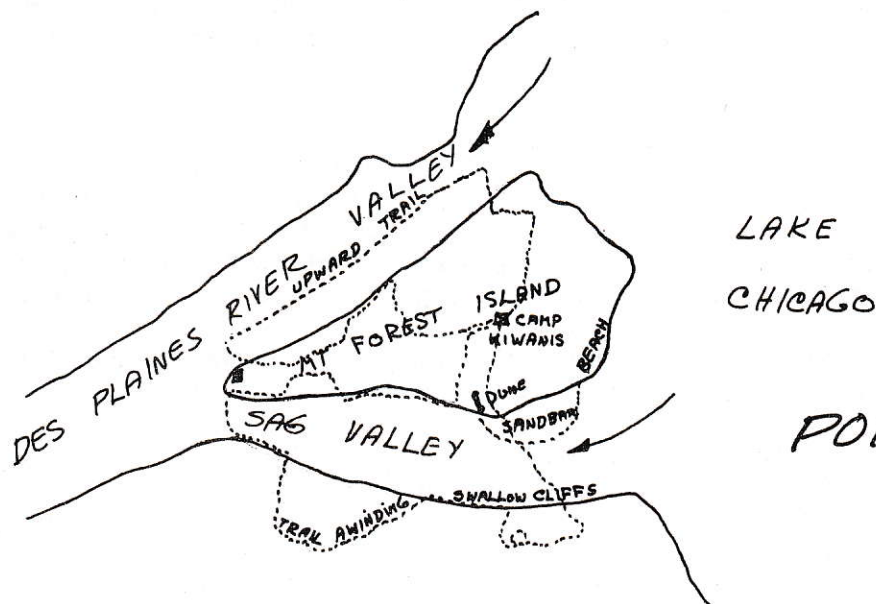
1. At Camp Kiwanis you must register for the trail at the ranger office and show him your copy of this booklet and your own Scout Handbook.

This area is very hilly and swampy compared to Chicago, which is very flat. During the Ice Age glaciers pushed down from Canada through Lake Michigan and spread over this area. They buried everything a mile deep in ice and snow. Then they melted.

As the glacier had moved forward it scooped up great quantities of rocks and clay. One of the last glaciers pushed to here and then melted as fast as it moved forward and all the rocks and clay were left piled into hills. This is what made the area so hilly and high above Chicago.

This melt water flowed into Lake Michigan, overflowing it and flooding all of what is now Chicago. This made the beach of the Lake only a few miles away.

All this water had to go someplace. It flowed on both sides of this area in two great streams, making it an island. A few miles west of here the two great streams joined, forming a mighty river bigger than the Mississippi River is today. On the Upward Trail and Trail Awinding we will see these great valleys of ancient rivers.



POINT 1.

2. Little Red Schoolhouse. (2.1 miles of trails)
Hike the nature trails leading out of the area. They are the Farm Pond Trail, White Oak Trail, and the Black Oak Trail. This should take at least an hour. Make sure you learn to recognize the trees along the trail. Compare the tree with the description in the book.
3. Edge of Tomahawk Slough.
Find the names of each of the bog plants growing here. Page 179 of the Scout Handbook illustrates them. (Section on bogs and marshes.) Notice that each of these plants can grow only at a certain depth of water. The cattail is farthest out and the arrowleaf is close to shore. In deeper water there is seaweed.

4. Pulaski Woods West (4.0 miles)

Pumps and big shelter building here at parking lot. There is a magnificent view to the northwest. Look at Tomahawk Slough from the shelter. Notice that the cattails grow only along the edges of the pond—it is too deep for them out in the middle—and it is also too shallow for them at the shore. Each autumn the dead plants sink to the bottom and fill up the pond making it shallower. Someday the entire pond will be shallow enough for cattails. Years after that the pond will fill up completely and become dry land. On the slope below the shelter there is a forest of oaks and hickories. Find the northern red oak and the white oak. This forest once covered these hills completely but in many areas it has been cut down and the land farmed for many years.

5. On Horse Trail a few hundred feet west of Wolf Road. Trail runs along the side of a hill.

As you probably know already, some plants need a lot of sun and others need a lot of shade. There is a lot of shade on the side of this hill because it is away from the sun and faces north. Find the sugar maple tree here. It needs a lot of shade in order to grow.

Continue hiking west along this horse trail to point 6. Farther ahead you can see where the forest of oaks and hickories that once covered this area has been cut down. Now that the area is idle, the original forest has not returned. Hawthorn trees have come instead. There are dense jungles of hawthorn trees all through this area.

6. Shelter with fireplace beside trail. (6.0 miles)

The valley to the north is the Des Plaines River valley. It was formed by one of the streams that drained Lake Michigan during the Ice Age. At that time a mighty river a mile wide flowed rapidly through this valley, filling it about 50 feet deep.

Head west on horse trail. Hawthorns are weed trees. They grow where the oak-hickory forest has been cut down. Young hawthorns need a lot of sun. Young oaks and hickories need shade to grow. Hawthorns start growing in an empty field and soon form a jungle of thorns. Under them is enough shade for young oaks and hickories. The young oaks and hickories grow up and shade out the hawthorns and after about 200 years there is another oak-hickory forest.

Head west on trail and among the hawthorns find wild roses, crabapples, sumac, and box elder. Under them see if you can find any oaks and hickories.

7. St. James Cemetery Entrance. (7.5 miles)

On this hill once stood an Indian Village and Signal Relay Station. Smoke signals were sent and received from points across the valley, and from Indian Villages near Willow Springs and Palos Park. An old Indian trail headed southwest across a swamp to another village near what is now Joliet. In 1830 Colonel Archer's Road was built to facilitate construction of the Illinois and Michigan Canal. Remnants of the old road can be found in the area.

Head west along Archer Avenue and cross Rte. 83. Follow Rte. 83 northwest walking on the west side of the highway. The first canal the bridge crosses is the I & M canal, which has been filled in many places. This is point 8 on the map.

Crawl down the embankment to the canal. You will walk east on the path on the north side of the canal.

8. After surveys in 1830 and 1831, work on the canal started in 1836 and was completed in 1848. Thousands of men came from all over America to work on it. They worked with picks and shovels and wheelbarrows. It is 100 miles long and runs from Chicago to Peru, Illinois, where the Illinois River is deep enough to float barges. Barges were towed up and down the canal by oxen walking on the "tow-path trail" which is the road beside the canal.



9. Willow Springs Road. (12.1 miles)

The first highway you come to after leaving the big bridge at point 8. The I&M canal is at the bottom of the valley that is the bed of the ancient river. As you hike south on Willow Springs Road notice how steep the valley sides are.

10. Willow Springs Woods. (Pump)

Up the side road into the parking lots. Find the Horse Trail. Try to identify each of the trees of the oak-hickory forest: white oak, black oak, bur oak, northern red oak, basswood, black walnut, shagbark hickory, white ash, wild black cherry, hop hornbeam,

11. Esker.

The esker is a long narrow snakey hill with steep sides. The horse trail runs on top of it.

Most of the hills in this area are just piles of clay, but the esker was formed in a special way when the glacier was here. When the glacier melted, a river formed in a tunnel inside the glacier to drain out the melt water. The stones and gravel that could not be carried by the current settled to the bottom of the tunnel. When the glacier had completely melted, these stones and gravel sank to the ground and formed this esker.

End trail at Camp Kiwanis. (14.6 miles)

TRAIL AWINDING

12. Camp Kiwanis.

Read the information under point 1 on the Upward Trail. Upward Trail should be hiked first. Register at the Ranger Office.

13. Site of a small Pottawatomie Indian Village.

14. Sand Dune---a sandy area now, destroyed by farming. (2.1 miles)

As was said in point 1, Lake Michigan covered nearly all of Chicago several thousand years ago. The shore of the lake was along here and there was a sandy beach about a mile northeast. Big storms from the northeast blew sand off this beach and formed this dune. Most of our big storms still came from the northeast.

Across Rte. 45 find a big gravel pit. The great river that passed through this area after the Ice Age went around a bend here. Here sand and gravel are being dug out of a sandbar of that great river. On the rock piles to the south find the cottonwood and the ash.

15. Kean Avenue and Bridle Path.

Palos Park woods parking lot is just east. (Pump)

The valley between here and the sand dune was occupied by the glacial river. It was about 40 feet under water at one time.

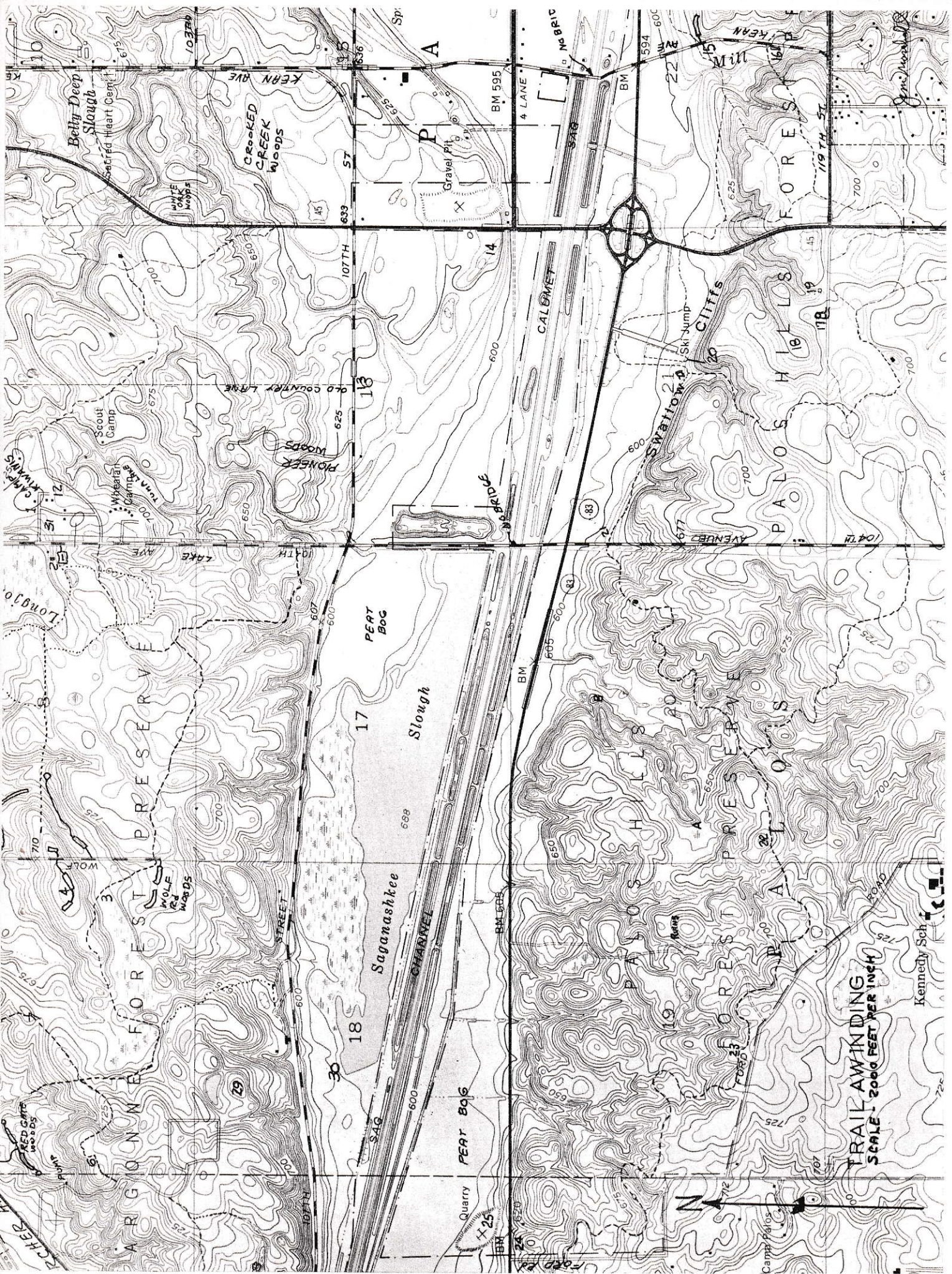
Mill Creek Valley at this point is well sheltered by high bluffs and, for this reason, some very special plants grow here. Find a big sycamore tree growing beside the bridle path. You can't miss it. The sycamore is more often found in the south.

16. McLaury Springs Woods. (Pump) Also a sheltered area.

Find the Kentucky coffee tree. Beside the trail bridge over Mill Creek find an unusually large and well-formed hop hornbeam.

The last glacier dumped its clay on a huge dust dune here. This dust dune, formed of dust blown by the wind, is something like a sponge, absorbing water in the rainy season and letting it seep out during the dry season. This is what causes the springs.

17. West end of Swallow Cliff Woods. (Pump)
Here is a grove of white pines planted in the 1920's.
18. Beeline Bog.
A hundred years ago this bog was a lake deep enough for swimming. But Tom Ravine cut into the rim of the lake and drained the water out of it. Head down Tom Ravine which runs east from this bog and come up Jerry Ravine to point 1. Find sugar maple, basswood, hop hornbeam, and Kentucky coffee tree in these two ravines. These types of trees are found in ravines like these.
19. Top of Jerry Ravine.
20. Top of Swallow Cliffs. (Toboggan Slides)
The valley to the north was that occupied by the great glacial river. Its shoreline was about half way up the cliff. The great river went around a bend here. These cliffs are on the outside of that bend.
Cabin Ravine. (Just west of slides)
In this ravine also you will find the trees mentioned at point 18. This was the site of the home of the pioneer Neumann family who settled here in 1823. Head west on bridge path along edge of the great river valley.
21. Pump.
22. Shelter near trail in the middle of a rather remote and wild area. (7.4 miles)
Good view. You can see an esker in the contour lines from A to B. This shelter is on a type of hill called a kame. It is full of gravel and was formed by melt water pouring out of the glacier and depositing its load of stones and sand in a tall, steep pile.
23. Along the trail near Ford Road.
This is the edge of the Palos Hills Forest. To the southwest is the prairie. One interesting question is why some areas are prairie and others forest. It is probably due to several causes.
The Indians set fires in the prairie in order to hunt game. Prevailing winds from the southwest blew these fires to the crest of this hill but not down the leeward side. The forest has grown only on the leeward side of this hill and in other places where it was protected from fires.
24. Pump. (10.0 miles)
Pump may be out of order. The pump is at the edge of the ancient glacial river. The area to the north is a peat bog.
25. Quarry. View from highway.
The quarry is at the bottom of the ancient glacial river bed. The current was so rapid it scoured the valley down to bedrock. The bedrock is dolomite, a rock similar to limestone. You can see great piles of it where it has been dug out of the Cal-Sag Channel.
This dolomite lies under the entire Chicago region, sometimes as far down as 140 feet. The skyscrapers in the Loop are built on it.
The rock is made of the skeletons of millions of sea animals that lived from 340 to 380 million years ago. This period of time is called the Silurian Age. (After it comes the Fish Age, then two Coal Ages.) At that time most of North America was covered by warm seas inhabited by small sea animals similar to snails. When these animals died their bony parts sank to the bottom and eventually became this rock. Some of these rocks contain good fossils. Look for them. Notice that the rock beds are as smooth as pavement, but broken up by joints, something like a jigsaw puzzle.



26. Cougar Creek. (View from bridge)
Here a stream has cut a canyon through the limestone leaving many grottos and small caves in the sides. Some of the water of this creek pours into a sink-hole and into flooded caves far underground.
Cross to west side of highway, so you walk facing the traffic. Head northwest on Rte. 83 over the big bridge on the sidewalk.
27. Middle of bridge over Sag Valley on sidewalk.
The valley below was occupied first by the great glacial river, one of the two great streams draining Lake Michigan during the Ice Age. The big bridge to the north goes over the channel of the other stream. The two streams met in the valley just west and passed together down through the Illinois River to the Mississippi.
After the Ice Age the valley was occupied by the great Ausaganashkee Swamp. It bred mosquitos and was a great obstacle to the development of the canals.
28. Dynamite Road.
Dynamite was stored here during the blasting of the modern canals. Are there different trees on the slopes of this ravine than there are on the slopes of the other ravines we have seen?
Head up the road and then cross-country to point 29.
29. Sag Hill.
To the south is the old Palos Golf Club House and beyond is the Sag Valley. The valley bottom is flat and at the same level as Chicago, only a few feet above Lake Michigan.
When the glacier covering this area melted, the water flowed into Lake Michigan, causing it to overflow. The lake level rose 60 feet to the 640-foot contour on the map. This flooded all of what is now Chicago and also the Sag Valley and Des Plaines River Valley.
As the glaciers melted farther north, some of the water drained out elsewhere and the water level sank to the 635-foot contour, then to the 620-foot contour. At this level, lake water flowed through this valley and what is now the Des Plaines River Valley.
Head cross-country to 30.
30. Parking lot and levee at west end of Saganashkee Slough. (13.7 miles)
In this area find the bur oak, sumac, and hawthorn. These trees grow in open areas like this. Notice that this valley has very few trees in it, whereas the Des Plaines River Valley is full of trees. The Sag Valley (where we are now) was a big swamp and never was drained until the Cal-Sag Canal was built. The Des Plaines River Valley was drained by the river so it was relatively dry. Trees require dry soil to grow and will be killed by constant flooding. In Saganashkee Slough you can see a grove of big willow trees that was flooded when this levee was built. All the trees are dead.
There is also a grove of quaking aspens in the area. See if you can find it.
31. Trail ends at Camp Kiwanis. (16.5 miles)

INDIAN RESERVE TRAIL

Trail starts at Trailside Museum, Chicago Ave. and Thatcher Ave. The Chicago & Northwestern Railway has frequent trains from the Loop and the west side to Maywood. This station is near the museum and shown on the trail map.

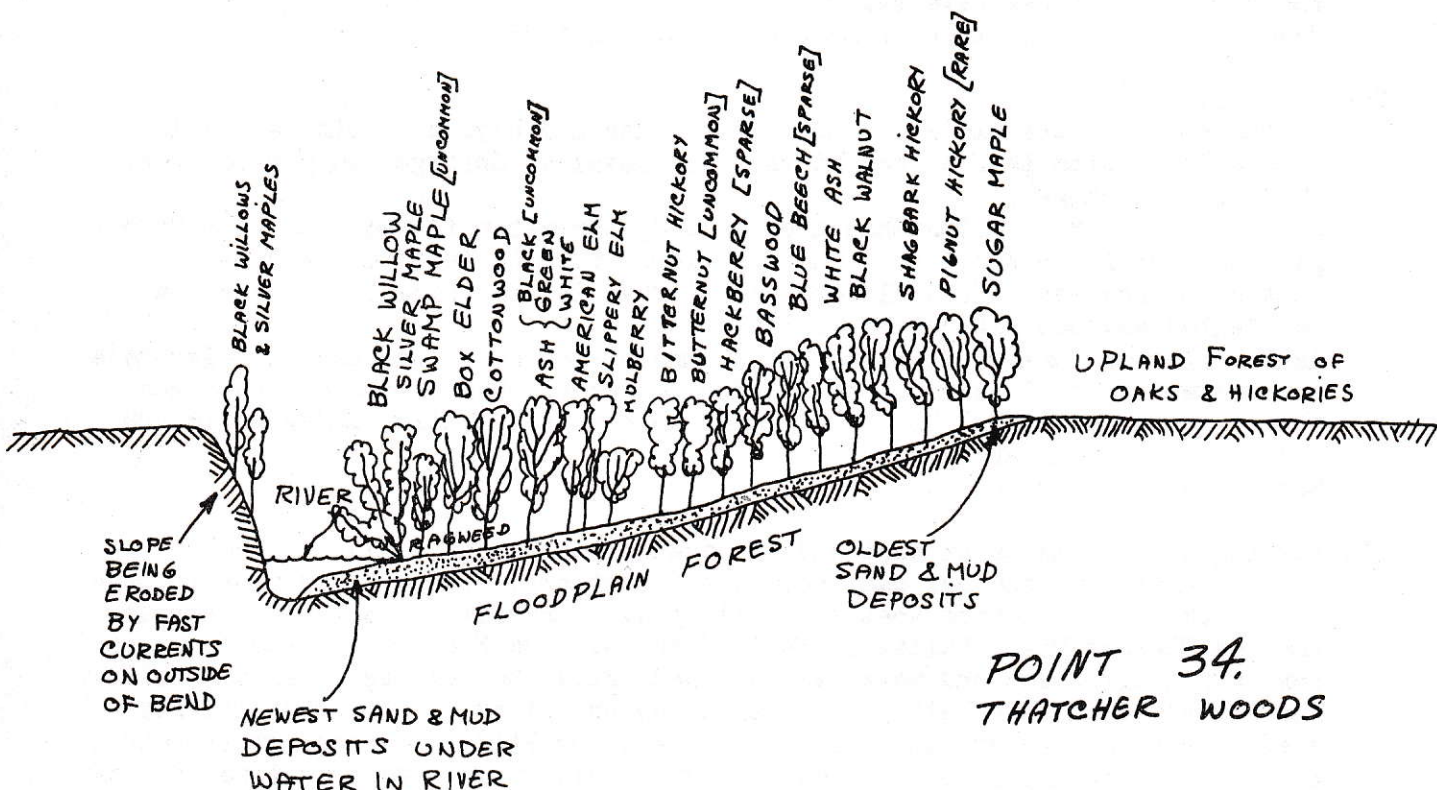
32. Trailside Museum.
If Museum is open, enter it and view exhibits. If there is a nature trail, hike it.

33. Lagoon just west of museum. It was once part of the river. You can see the old river channel in the contour lines on the map. Follow the old river bed back to the river. Lagoons such as this one are called ox-bow lakes. The river has changed its course many times.

34. Thatcher Woods Shelter and Field. (Pump)

Several thousand years ago the river flowed about 300 yards west of this building, through the field. But since then the river bed has moved slowly west until now it is about $\frac{1}{2}$ of a mile away. Wherever this river flows it deposits sand. It has deposited sand all through the area west of the play-field. On the oldest sand deposits are sugar maples. On the next oldest are oaks and hickories. On newer deposits are elms and ashes and on the newest deposits are cottonwoods and willows. These trees are shown in the diagram below and their location is indicated on the trail map also. These trees make up the floodplain forest.

We will be passing through several floodplain forests similar to this one. Try to identify every tree growing in the floodplain forest and collect a leaf from each one.



POINT 34.
THATCHER WOODS

35. Evans Field monument at parking lot. (Pump)

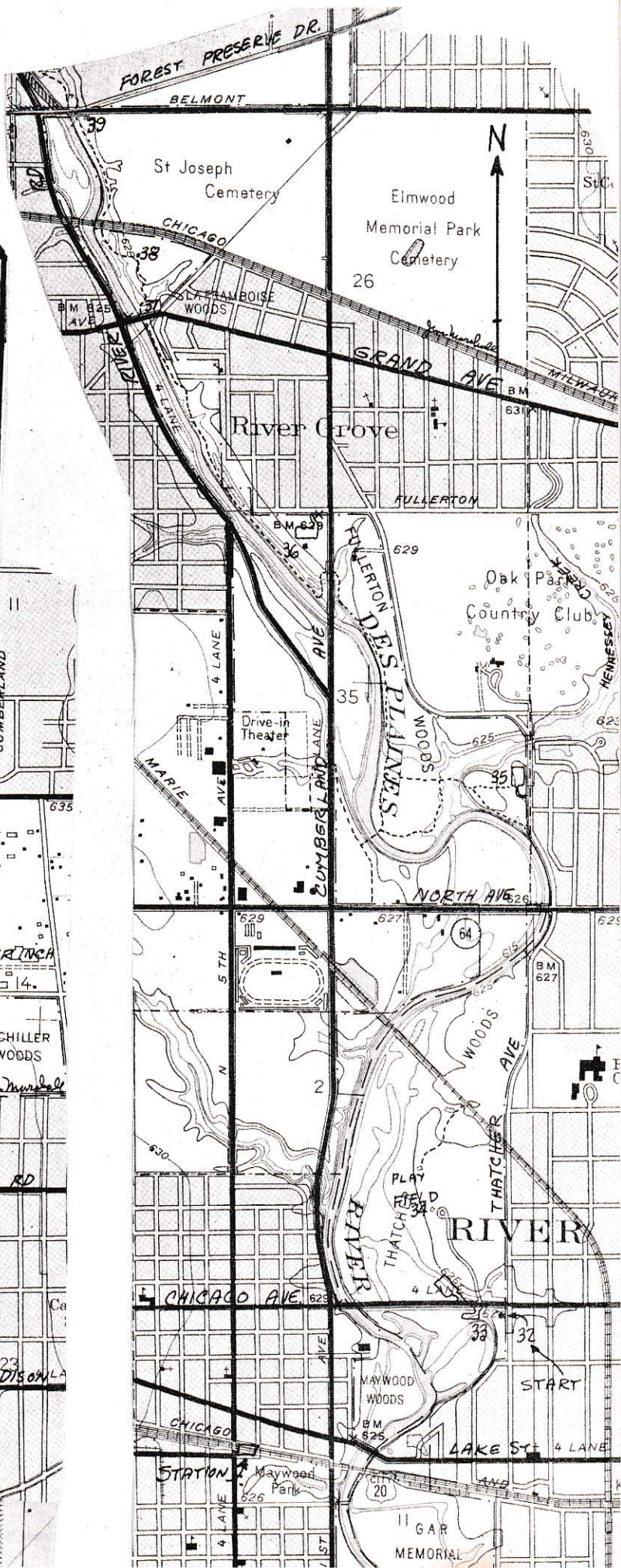
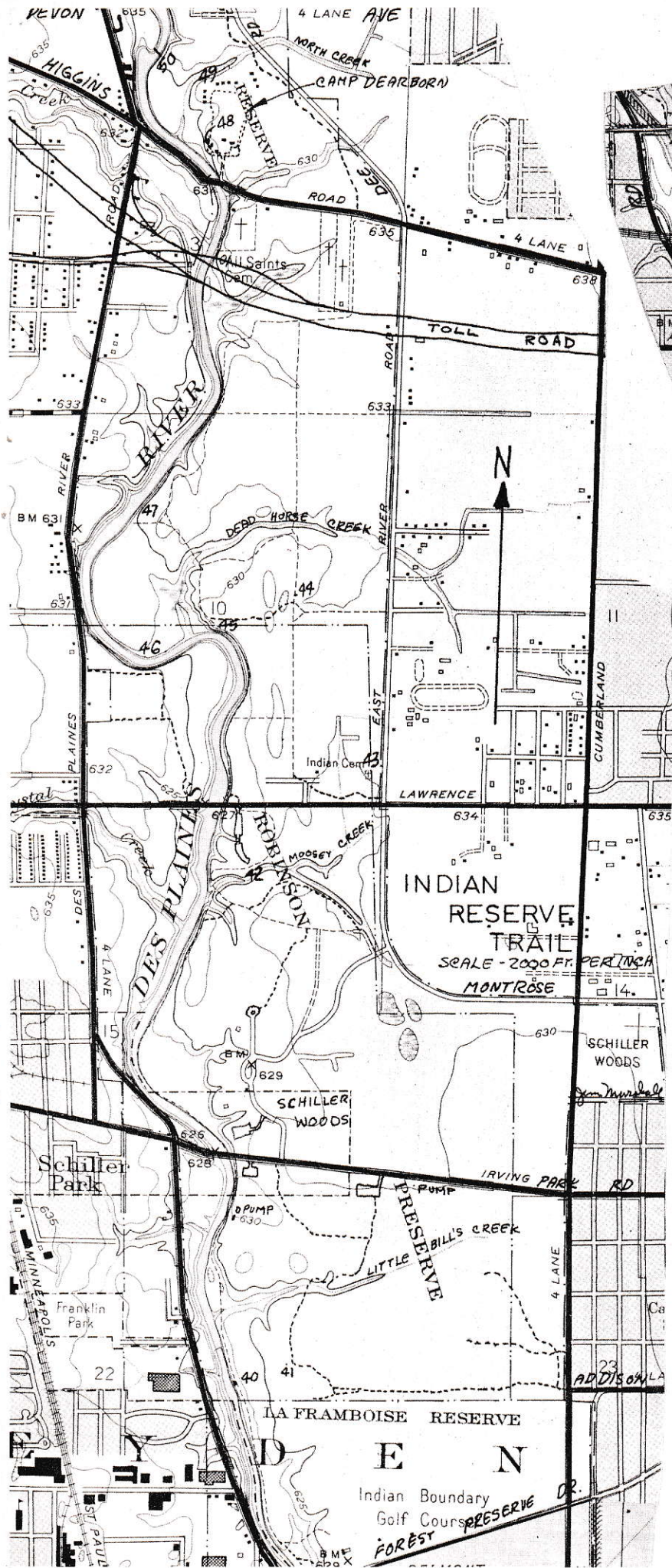
A heap of skulls was found here at the site of an Indian Village. They were destroyed in the Chicago Fire.

36. Along trail west of Cumberland Avenue. (Pump to north)

The trail runs on a sandbar between the river and a trough. Notice that the trees of the floodplain forest are arranged around the trough as if it is the river. What trees do you find on the sandbar along the trail? Where are these trees in the floodplain forest?

37. Along trail at Grand Avenue. (4.0 miles)

Here the trail crosses the old Indian Boundary Line. It runs NE and SW and is the north boundary of a strip of land 18 miles wide which was ceded to



the United States by the Potowatomies so the Illinois and Michigan Canal could be built. —August 24, 1818.

North of the boundary line are several Indian Reserves—land given to Indians and half-breeds for their help during the Fort Dearborn Massacre, the Blackhawk War and other Indian uprisings. One square mile was given to Jean La Framboise. His land covers the cemetery and the golf course. North of this is 2 square miles given to Alexander Robinson. They marked off these plots by twisting, bending, or blazing trees along the property lines.

38. Shelter in Woods north of Grand Avenue.

Between the shelter and the river is another good floodplain forest, similar to that at Thatcher Woods but smaller.

39. Along trail at Belmont Avenue.

The area to the east was occupied by a big Pottawatomie Indian Village at the time of Fort Dearborn.

North of Belmont Avenue the upper part of the floodplain forest has been cut down. The place of these oaks, hickories, and sugar maples has been taken by hawthorns. The original trees have not returned.

40. Shelter along river and trail.

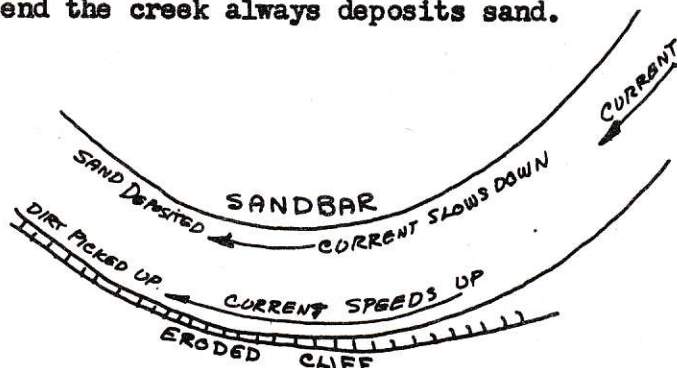
As recently as 1930 nearby stood 2 trees bent in the form of an X in line with another tree with a hole in it. Looking through the hole and the X carried your eye along the Reserve boundary. At the river stood a 5-limbed tree shaped in the form of a hand with knuckles and fingernails cut in each limb. Legend says that an Indian saw his son drown here one winter; the last thing he saw was his son's hand above the water. Axe-happy boy scouts, souvenir hunters, and initial carvers destroyed these trees. They didn't care whether anyone else wanted to see them. Next time you pick up an axe or knife remember what happened to these trees.

From point 40 go at an azimuth of 75 degrees for 950 feet to get to point 41.

41. Site of old Camp Fort Dearborn used by the Boy Scouts during the '20s and '30s. A foundation, pump stand, and other ruins can be found. This is the site of a battle between two Indian tribes and at one time arrowheads were very common here. Now the area has been picked clean. But there are some old trees that have been deformed by warriors to mark the site. In the area farther east are a few unmarked graves.

42. Pump at South Robinson Woods, near bridge path. (6.9 miles)

One hundred feet or so south of the pump is Moosey Creek. A stream, or a creek, or a river flows like a crack-the-whip race. When it goes around a bend it washes away dirt at the outside of the bend. Notice the bends in this creek. The small cliff on the outside of the bend is being washed away. On the inside of the bend the creek always deposits sand.



POINT 42.
MOOSEY CREEK

This same thing happens on all creeks and rivers that flow on nearly level ground. Notice also that each bend has a tail. The tail is a wet swampy area that shows where the bend was many years ago.

Now look on the trail map and notice that all Thatcher Woods is on the inside of a long river bend. That is why the river has deposited sand there. The floodplain forest grows wherever the river has deposited sand. You can find cottonwoods and willows of the floodplain forest growing along this creek.

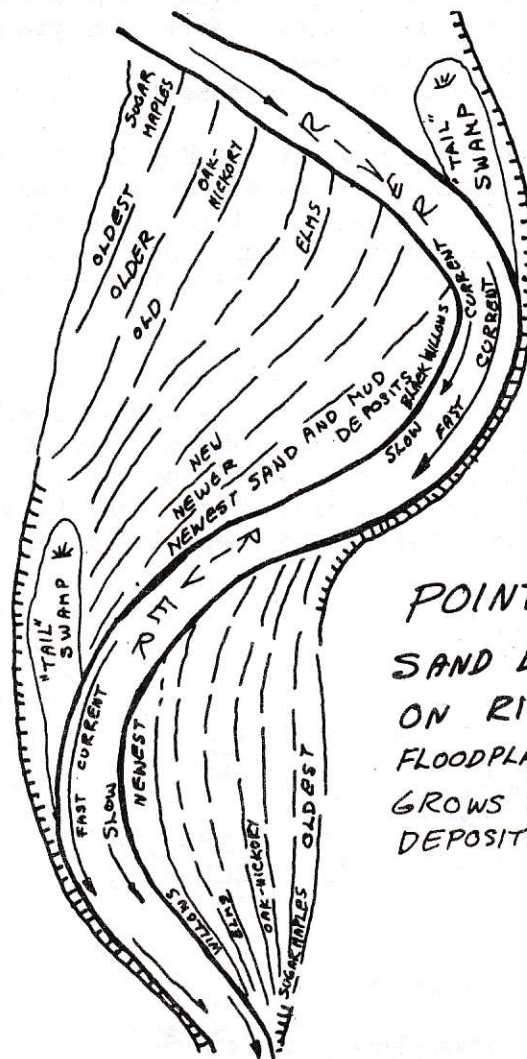
43. Old Indian Cemetery, along E. River Road.

A few hundred feet north of the cemetery is a narrow open forest of cottonwood, willow, dogwood, and button bush. This area was originally prairie, not forest. Early settlers plowed it up for crops but it has stood idle for many years and this is the forest that results. Except when it is disturbed, the tough prairie grass keeps seeds from taking root and growing into trees. Eventually this forest will die off and the area will again be prairie. Because the soil is so rich, nearly all of the original prairie land in Illinois has been plowed up and farmed. This field is one of the very few areas that have not been disturbed very much. Many of the plants that grow in open fields are weeds brought from Europe along with grain seeds. European weeds have replaced the original American grasses nearly everywhere. Here we can find the original prairie grasses that the Indians knew.

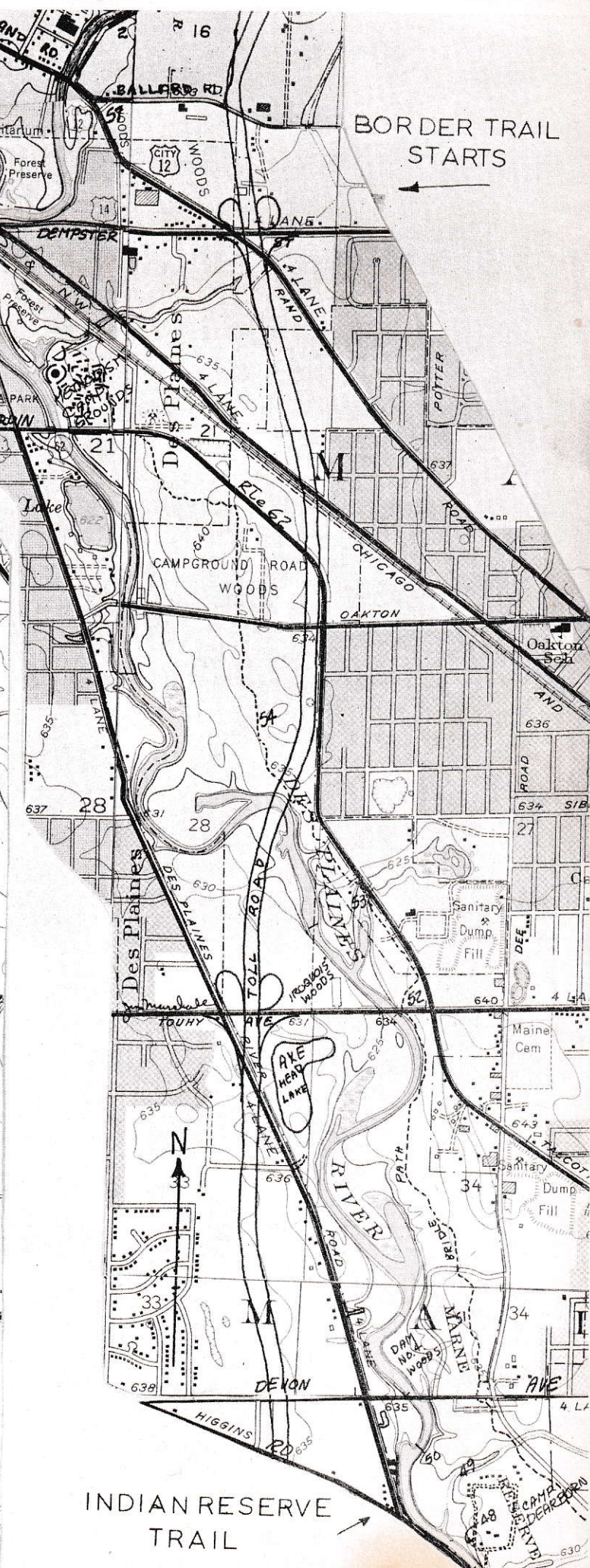
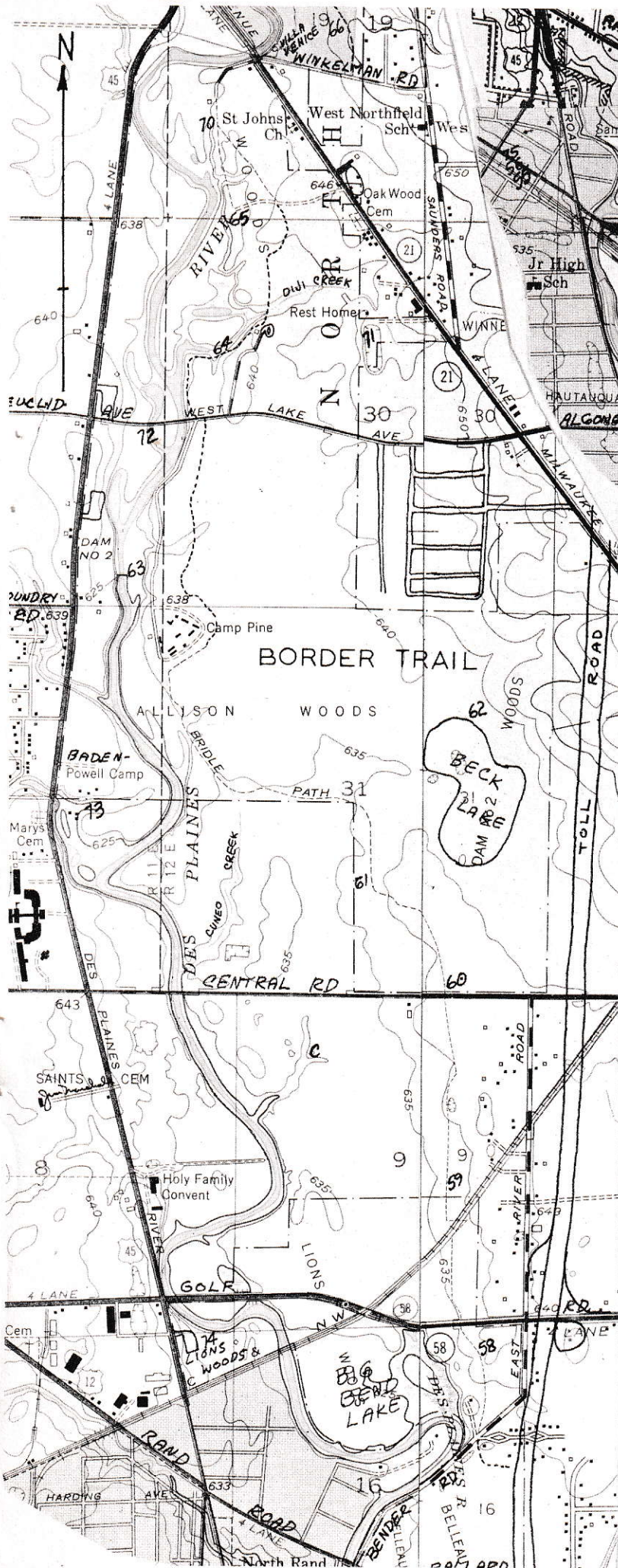
44. Pump. Robinson Woods, just south of the pump is a very fine forest of oaks and hickories. Just southwest of the pump is an old gravel pit full of water.

45. On trail at bend of River.

Notice the tail of this river bend and the steep slope running north from here along the horse trail. The tail of the bend is now occupied by Dead Horse Creek.



POINT 45.
SAND DEPOSITS
ON RIVER BENDS.
FLOODPLAIN FOREST
GROWS ON THESE
DEPOSITS



46. Along River.
Here is the usual floodplain forest, growing from sand deposited at the inside of the river bed, but it has been disturbed by timber cutting and grazing. Hawthorns have come into the area.
47. Sandbar in River, occupied by some big willows and ragweed of the lower floodplain forest.
Keep out of cemeteries along Higgins Rd. Hike cross-country to point 48.
48. Quartermaster store (QM) at Camp Fort Dearborn. (10.5 miles)
Certification point. Show the Ranger your own copy of the trail booklet and scout handbook.
49. Creek north of cabins 4 and 5. Here you can see the bends and tails of the creek, the same as at Moosey Creek, point 42.
50. Dam.
Hike north from the dam and notice that you are on the outside of the river bend and that the river is washing away the bank, causing a few trees to topple in. At Devon Avenue is a swampy area that is the tail of this river bend.
51. Long clay pits filled with water along horse trail.
Clay was dug out of these pits and the ground left bare. The cottonwood and willow are the first to grow here. In the floodplain forest these two types of trees are the first to grow from sand deposited by the river. So cottonwoods and willows are always found along the river bank.
The elms and ashes of the floodplain forest grow in the shade of these cottonwoods and willows so they can grow only at the edge of the river. Later, oaks and hickories shade out the elms and ashes and they in turn are shaded out by the sugar maples. At point 54 we will see a small forest of all sugar maple—too shady for any other type of tree. A Miami Indian village once stood here.
52. Pump. Notice on the map that all the river bends in this area have tails. The area just east is an ancient Indian sacred enclosure surrounding 2 mounds and the grave of a great chief whose spirit was worshipped.
53. Wells Creek along horse trail.
During the Ice Age water from a melting glacier to the east cut this trough.
54. Forest of sugar maples along the horse trail about 400 feet north of the toll road. This forest grows on a sandbar of a great shallow river that flowed here during the Ice Age. The soil is light and dry, which is what maples need. Maples provide too much shade for other kinds of trees so the forest tends to become all maple.
A few hundred feet north the maple forest ends (because the sandbar ends) and beyond are oaks and hickories.
55. Des Plaines. End of trail. (15.2 miles)
Return to Chicago on United Motor Coach buses to Rogers Park or Milwaukee and Lawrence. Call Vanderbilt 4-1884. Or Chicago & Northwestern Ry. train to northwest side and to Loop. (Wisconsin Division. Call DEarborn 2-2121 for information.)

BORDER TRAIL

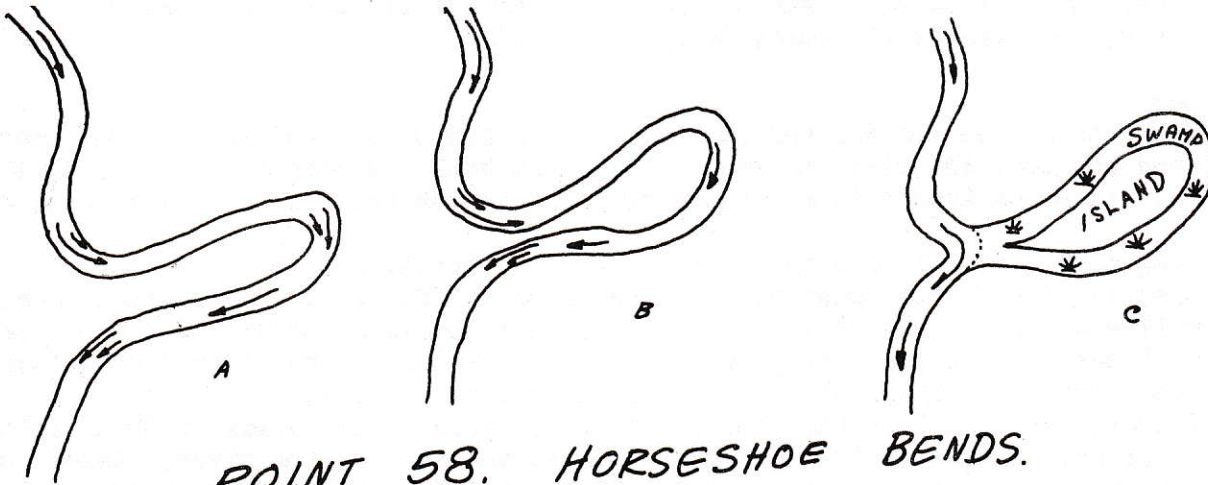
56. Trail starts and ends at Des Plaines railroad and bus station. Chicago & Northwestern Ry. trains run to Des Plaines. (Call DEarborn 2-2121 for

information.) United Motor Coach buses run to Des Plaines from Rogers Park and Milwaukee and Lawrence. (Vanderbilt 4-1884) Station shown on trail map.

57. Belleau Woods Memorial. What kind of forest is just east?

58. Along trail. Site of small Pottawatomie Indian Village. Another bigger village stood about a mile northwest. Mounds are still visible there but hard to find. (Point C)

Notice the horseshoe bend in the river southwest of here. River currents will cut through this bend someday. Then the old bend will be an oxbow lake. This is how the oxbow lake at the Trailside Museum was formed.



POINT 58. HORSESHOE BENDS.

The bog just west is an old river bed, though partly destroyed by excavation. It was separated from the river this same way.

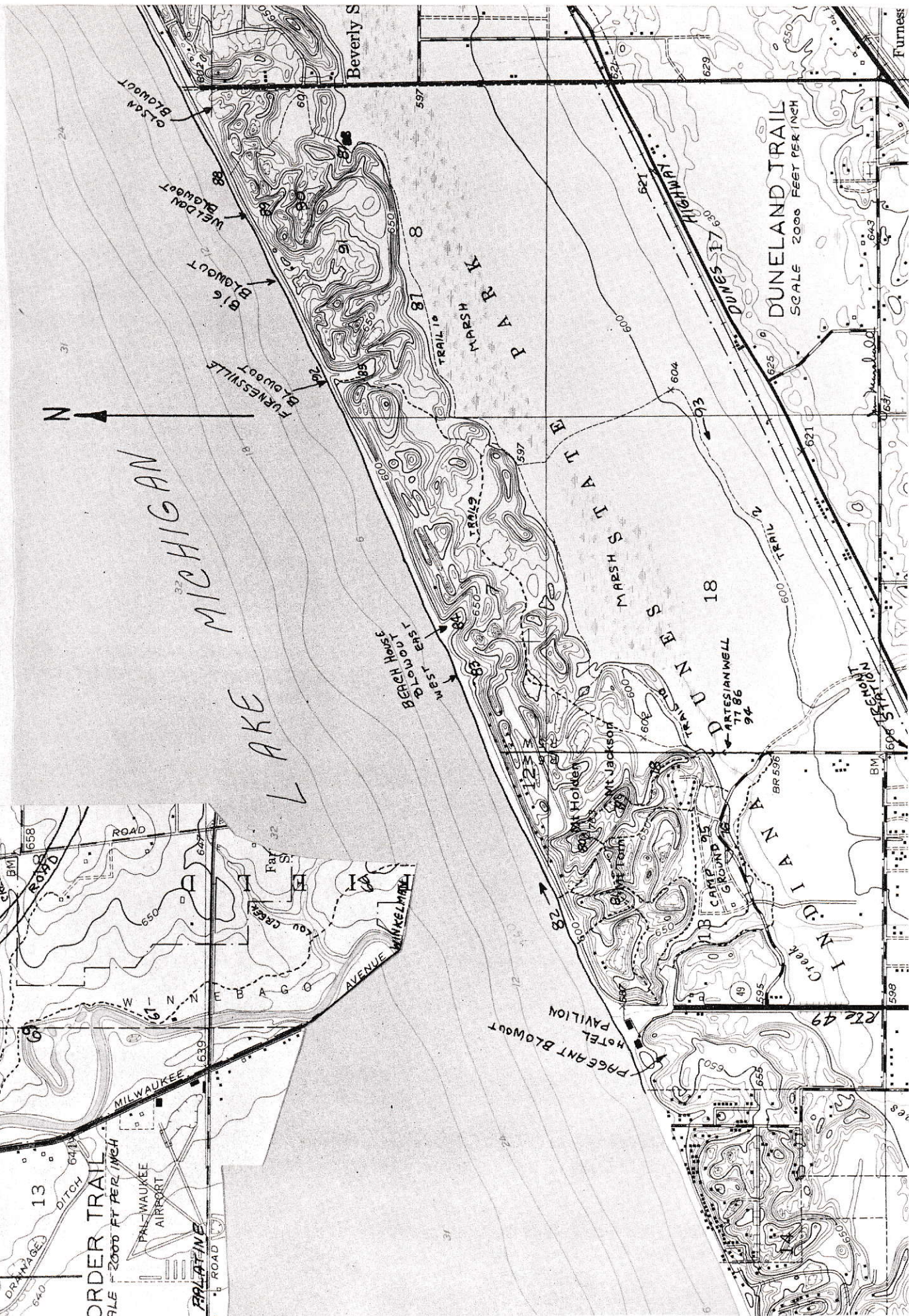
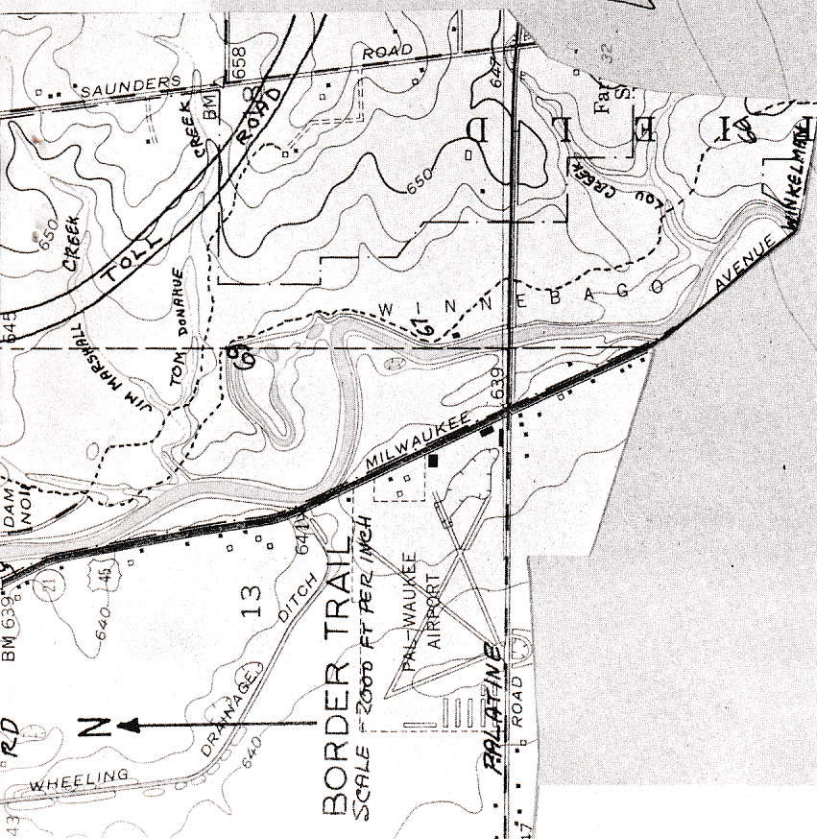
59. Along this trail can be seen several of the trees that grow at the edge of a forest. They protected the forest and themselves from grazing animals of the prairies, such as buffalo. These plants protect themselves with thorns: hawthorn, wild plum, wild crabapple, wild rose, black raspberry, gooseberry, and blackberry. These trees have bitter fruit: smooth sumac, black cherry, and choke-cherry. Try to find them.

60. Horse trail at Central Road.

Continue hiking north on the trail paying particular attention to the trees. The trail passes onto another old sandbar and there is another maple forest.

61. Indian trail tree shaped like an h, not easy to find. When this tree was a sapling, an Indian bent it over to mark a trail. He was heading west. Most trees bent in this manner died. What kind of tree is this? There are two more trail trees about $1\frac{1}{2}$ miles north.

62. North end of Beck Lake. To the northeast beyond the toll road is Kennicott Woods. Early settlers found it completely surrounded by prairie. But now the prairie that was once here is growing up in hawthorn and will become forest. The Indians set the prairies on fire to drive out the game and make hunting easier. This kept the forest confined to only a few protected areas. Since there are no more great fires, the forest is spreading over areas that once were prairie.



63. Dam No. 2. Pump here.
64. Lake Duncan. (5.4 miles)
View from horse trail. This is an oxbow lake. The river flowed through here until it cut across the bend and changed its course. Beavers building dams may have diverted it into the new channel.
In the water you can find cattails and lily pads, plants rarely found in a river but often in a swamp or lake.
This is also the site of an old Indian portage to Ouilmette on the Chicago River. (Pump)
65. Nature Center. Certification point. Be sure to register. View the exhibits and hike the nature trails--Grove portage trail, $\frac{1}{2}$ mile; Green Bay Trail, $\frac{3}{4}$ mile; Little Fort Trail, $\frac{1}{4}$ mile.
66. Open area due to excessive grazing of cattle and wood-cutting in the forest.
67. Along horse trail to Dam No. 1.
Notice the scattered groves of sugar maples and others of oak-hickory. Sugar maples grow where the soil is light and dry and on sandbars scattered through the area.
68. Dam No. 1. Pump here. (9.65 miles)
69. Bearskin Lake. Another old oxbow lake, now a low swampy area.
70. Here the trail runs along an old stagecoach route--the Northwest Plank Rd.--used from 1848 to 1858. It is a corduroy road part of the way. It runs in a straight line from this point to point 71. Follow it.
71. Old gravel pit, similar to point 51 in Miami's Woods north of Camp Fort Dearborn. However here elms and ashes have replaced the cottonwoods and willows that grew here once.
72. Old river beds, probably the work of beavers building dams. Follow path along west side of river.
73. Swamp just south of cabins of Camp Baden-Powell--another old river bed, now drained by Winandy Creek. Probably the work of beavers also.
74. Lions Woods. Shelter and pump.
By now you have noticed that there is far more forest on the east side of the Des Plaines River than on the west side. Fires set by the Indians were blown by winds from the southwest up to the river's edge. The forest on the east side was sheltered from these fires by the river. The trees on the west side were burned by it.
75. Des Plaines Station. End of trail. (17.4 miles)

DUNELAND TRAIL

Trail is in Indiana Dunes State Park which can be reached on the Chicago, South Shore and South Bend Ry. from Michigan and Randolph and other stations on the South Side. Tremont, Indiana. It may also be reached on the Calumet Skyway and Indiana Toll Road, turning off at Chesterton, Indiana, and driving north to the park. Special low-rate camping fee for Scout troops and Explorer units. Trail starts at camp ground.

76. Notice the low sand dune here. Notice what trees are growing on it.
77. Artesian Well.
78. Crest of Tolleston Dune, on Trail 8.
This is the oldest sand dune in the area, about 8000 years old. Like all the other dunes it is made completely of sand blown off the beach by the wind. However, it was formed when the water level of Lake Michigan was about 20 feet higher than it is now. It is a continuation of the low dune seen at point 76. Winds from the west formed this part of it, whereas the dune at point 76 was formed by winds from the northwest.
Notice that the crest of this dune is covered with black oaks. Even though it is the oldest dune in the park, oaks, hickories, and sugar maples have never replaced these trees—because the dune is too exposed to sun and wind to provide enough shelter for them.
79. Mt. Jackson. Trail 8.
80. Top of Mt. Holden. Trail 8.
Sand is blowing off the beach, up this hill and is dumped at the top. Each year the mount grows higher. Some of the sand has spilled down the south slope. Notice the bark of the trees at the top.
Mount Jackson was formed the same way as Mt. Holden, but about 3500 years ago. Then the lake level was about 10 feet higher than it is now and the shoreline was about 900 feet closer to Mt. Jackson than it is now.
81. Mt. Tom. Trail 8.
Sand still blows off the beach to this mount but the forest between stops most of it. Evergreens can grow now where there was once bare sand. Head down to beach and east along shore.
82. On beach. "Barking Sand"—drag your feet across the dry beach sand. The sand will "bark" if the humidity is right.
How does sand get on the beach? New sand must be brought in to replace the sand blown off the beach onto the dunes. A water current in Lake Michigan scrapes rocks and clay off the shore between Waukegan and Chicago. In the lake the rocks are ground into sand. The current brings the sand past here and each wave then deposits a tiny amount of sand on the beach. This adds up over the years.
Lake Michigan is about 700 feet deep out in the middle. Tides are about 3 inches high.
Between red and green cottages a new blowout has formed. Perhaps a big tree fell over here and left the sand exposed. Now the wind has taken hold, cut through the dune and blown the sand into the forest beyond. That forest was once very sheltered from the wind and sun, being down in a hollow. Now it is exposed to strong winds off the lake. Which types of trees are drying up? Farther east storms have cut away part of the fore-dune, showing layers of sand laid down by the wind. Notice that there are no plants at all growing on the beach. Wind blowing sand off the beach blows away the seeds. The wind is usually from the northwest.
On the fore-dune there are willows, sand cherries, and grasses. These plants manage to grow fast enough to keep from being buried in the sand dumped on them by the wind.
83. West side Beach House Blowout. Once this blowout was all moving sand. Then came a year of mild winds and the whole blowout grew up in grass. The grass

held the sand against the wind and now there are only small patches of moving sand. Toward the beach a new blowout has formed in this old blowout.

84. East side Beach House Blowout.

A blowout is a desert---there is no protection from drying by the sun and wind. The temperature drop at sunset would kill all but the hardiest plants. There is little moisture and less soil for plants to grow.

The tree that lives here is the cottonwood poplar. The seeds of the cottonwood are cottony. They are blown about by the wind until they are bogged down in ponds. When the cottonwood gets big, it obstructs the wind so the wind dumps sand around it. This fills in the pond and no more cottonwoods grow because no more seeds get bogged down. Only the poplars that have already taken root continue to grow.

Continue east on beach. In the dune on the right you can see the tops of the cottonwoods sticking out. The wind has heaped the sand on them and buried them almost completely. They grew from a pond at lake level. Cottonwood branches can become roots and the roots can become branches, so it continues to grow when buried like this.

Find also the arbor vita. It starts from a pond at lake level also and continues to grow while being buried with sand. The area is too open to the wind and sun for other trees---they would dry up. When the pines get big they shade the poplars which eventually die from lack of sunlight.

Climb to the top of the dune and notice the abrupt change in the type of vegetation on the south slope of the dune. The plants that grow here can't stand the severe conditions on the north side of the dune---strong cold winds and burial by sand. On the south side of the dune, competition is too thick for the cottonwood and it is shaded out.

Notice the "turret dunes"---grass grows on top while the wind erodes the sides.

85. Furnessville Blowout.

Return on Trail 9 (Black Oak Forest) to the southwest. This forest covers the area that was once moving sand, blowouts, and dunes. The dunes along this trail are about 1000 years old. The same black oak forest grows on them that grows on the Tolleston Dune, 8000 years old. The area is not sheltered enough from wind and sun to support other forests such as oak-hickories or sugar maples. These trees will be found only in sheltered pockets and on leeward slopes near here.

Moving sand first grows up in grasses as we have seen at the blowouts. Grasses provide enough stability for a forest of jackpine, white pine, junipers and poison ivy to grow. Pine needles provide some topsoil. The pines also provide enough shade and shelter from the wind for black oak seedlings to grow. But when the black oaks get big they make the ground too shady for young evergreens. So the evergreens slowly die out and a forest of black oak replaces them. In this forest there are sassafras and witch-hazel shrubs, also blueberry and poison ivy. Find each one.

It gets cold here quickly after sunset, but the temperature drop is not as fast as under the pines or poplars. There is more wild life here---mice, rabbits, squirrels, toads and snakes.

86. Artesian Well. (5.2 miles) Drinking fountain.

Head east on Trail 10. Trail heads through a forest of oak and hickory, known here as the leeward forest because it grows on the side of the dunes that is away from the wind. This oak-hickory forest is similar to those along the other Fort Dearborn trails.

87. At each pinery there are only big pines and no young ones at all. As the pines grew bigger, the oaks grew up and made the ground too shady for young

piners. The lower branches of the pines are all dead from lack of sunlight.
(Trail 10)

88. As we leave Paradise Valley and head toward the lake, we pass through a small black oak forest, then a pine forest with poplars, finally the beach.
(Trail 10)

89. Weldon Blowout, east of Big Blowout. This small blowout is moving so fast no vegetation can grow on it. As it grows bigger and spreads out more, it will move more slowly. Sand is blowing off the beach and out of the blowout. It is being dumped at the south end causing the blowout to move farther south, burying the forest as it goes. Sand is blowing out of the middle of the blowout uncovering a buried forest—a tree graveyard. Hike through the blowout and see all of this.

The sand at the south end of the blowout stands at an angle of 32 degrees with the horizontal. Forest grapevines and chokecherries grow on this slope. This is the same sort of slope occupied by the oak-hickory forest along Trail 10 that we have just seen. The level of Lake Michigan has dropped about 10 feet since then. So what was once a bare slope like this with grasses and vines became an oak-hickory forest.

90. Pincer Forest. Here moving sand is closing in on a forest from both sides.
(West side of Weldon Blowout)

91. Big Blowout. Notice the large tree graveyard in the middle. Only parts of this blowout are moving. The bigger a blowout is the slower it moves; finally vegetation overtakes it.

At the southeast end of Big Blowout. When the rim of a blowout gets high above the forest, winds from all directions hit it and round it out into a cone like Mts. Jackson, Holden, and Tom. This is just starting to happen here. Notice that there are different kinds of plants growing in different parts of the blowout. Every scout who has planted a garden knows that some seeds are buried deeper than others. Here the wind dumps different amounts of sand in different places so seeds get buried at different depths. Only those seeds buried at their correct depths grow, and this is especially noticeable at the rim.

92. Furnessville Blowout. A small blowout in this blowout has cut through the dunes showing a good cross section.
Head to Trail 2. Follow it south.

93. Here is a forest of sugar maples and beech. It grows in the most sheltered area of all. This was the beach of Lake Michigan about 8000 years ago and the shore was where the marsh starts. Since then the lake level has dropped 20 feet, 10 feet at a time. The dunes to the north have cut off the wind so that now this forest is very much sheltered. When this area was beach, cottonwoods and arbor vita grew here. They were probably succeeded by black oaks, then oaks and hickories, and finally this forest. (Trail 2)

94. Artesian well. (11.4 miles) Hike Trails 7 and 4. Due to the hilly nature of this area it contains the black oak, oak-hickory, and beech-maple forests. Pay close attention to the location of each forest: black oak forest—in the least sheltered places, beech-maple forest—in the most sheltered places.

95. Camp ground, trail ends. (13.3 miles)

FORT DEARBORN TRAILS MEDAL APPLICATION

Scout: _____

Age _____ Unit _____

Address: _____

Telephone _____

District _____

SCORE BOARD

1. ADVANCED TO FIRST-CLASS RANK.

O.K. Date _____

Unit Leader _____

2. READ THE CHAPTER ON WILDLIFE AND WOODLORE IN
-
- THE SCOUT HANDBOOK.

O.K. Date _____

Unit Leader _____

3. HIKE THE 5 TRAILS BELOW IN THE CORRECT MANNER.

Upward

O.K. Date _____

Unit Leader _____

Trail A winding

O.K. Date _____

Unit Leader _____

Indian Reserve

O.K. Date _____

Unit Leader _____

Border

O.K. Date _____

Unit Leader _____

Duneland

O.K. Date _____

Unit Leader _____

Note: a) Carry with you and use this Trail Booklet and Handbook
for boys on each trail.

b) Be sure to register at each certification point.

4. TAKE THE CONSERVATION PLEDGE--

I certify by my signature that I have on my Scout Honor hiked the trails listed above. I have kept in mind the need for conservation of our woodlands and have done nothing to make others regret my use of them. In places I camped or prepared a meal, I have tried to leave the site cleaner than I found it. In my contact with other people, animals, and the property of others, I have tried to exemplify the Scout Oath and Law.

Date _____ Scout _____

5. VISIT THE CHICAGO ACADEMY OF SCIENCE MUSEUM IN LINCOLN PARK.

O.K. Date _____

Unit Leader _____

6. VISIT THE SITE OF FORT DEARBORN AT MICHIGAN AVENUE AND WACKER DRIVE.

O.K. Date _____

Unit Leader _____

UNIT LEADER'S APPROVAL

This is to certify that the above named Scout has faithfully fulfilled the requirements for the Fort Dearborn Trails medal and I recommend him for this recognition.

Date _____

Unit Leader _____

Please return application to: Camping Service
9 W. Washington Street
Chicago 2, Illinois

